DOCKET NO.: 48503-0002-01-US (AHP-99024D1)

Application No.: 09/658,734

Office Action Dated: August 3, 2006

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-67. (Canceled)

- 68. (Previously presented) A method for identifying a candidate compound useful for stimulating chromosome synapsis in a cell, comprising:
 - a) contacting MSH5 protein with a test compound;
 - b) determining the meiotic activity of the MSH5 protein in the presence of said test compound;
 - c) selecting a compound that stimulates the meiotic activity of the MSH5 protein; and,
 - d) identifying said selected compound as a candidate compound useful for stimulating chromosome synapsis in a cell.
- 69. (Previously presented) A method for identifying a candidate compound useful for stimulating chromosome synapsis in a cell, comprising:
 - a) contacting a cell expressing an MSH5 gene with a test compound;
 - b) determining the expression of the MSH5 gene or the meiotic activity of MSH5 in the presence of said test compound;
- c) selecting a compound that stimulates the expression of the MSH5 gene or the meiotic activity of MSH5; and,
- d) identifying said selected compound as a candidate compound useful for stimulating chromosome synapsis in a cell.
- 70. (Previously presented) A method for identifying a candidate compound useful for inhibiting chromosome synapsis in a cell, comprising:
 - a) contacting MSH5 protein with a test compound;

DOCKET NO.: 48503-0002-01-US (AHP-99024D1)

Application No.: 09/658,734

Office Action Dated: August 3, 2006

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

- b) determining the activity of the MSH5 protein in the presence of said test compound;
- c) selecting a compound that inhibits the meiotic activity of the MSH5 protein; and,
- d) identifying said selected compound as a candidate compound useful for inhibiting chromosome synapsis in a cell.
- 71. (Previously presented) A method for identifying a candidate compound useful for inhibiting chromosome synapsis in a cell, comprising:
 - a) contacting a cell expressing an MSH5 gene with a test compound;
 - b) determining the expression of the MSH5 gene or the meiotic activity of MSH5 in the presence of said test compound;
 - c) selecting a compound that inhibits the expression of the MSH5 gene or the meiotic activity of MSH5; and,
 - d) identifying said selected compound as a candidate compound useful for inhibiting chromosome synapsis in a cell.